

IN THE CLAIMS:

1. (Currently Amended) An electrical connector comprising:

a first surface formed from a first electrically conductive material and embedded on said surface a plurality of spaced apart particles of a second electrically conductive material, said particles having a nominal pre-embedded diameter of greater than 50 microns and forming a discontinuous layer raised on said surface with said second electrically conductive material being other than said first electrically conductive material and with said electrical connector having a contact resistance of less than 10 milli-Ohms.

2. (Original) The electrical connector of claim 1 wherein said first surface is made from a metal comprising at least one of copper, aluminum, brass, stainless steel or tungsten.

3. (Original) The electrical connector of claim 1 wherein said particles comprise at least one of tin, silver, gold, platinum, metal alloys, or mixtures thereof.

4. (Currently Amended) The electrical connector of claim 3 wherein said particles comprise tin or mixtures of tin and any other ~~another~~ metal.

5. (Original) The electrical connector of claim 4 wherein said particles comprise alloys of at least one of tin-copper, tin-silver, or tin-lead.

6. (Original) The electrical connector of claim 1 wherein said particles have a nominal pre-embedded diameter of greater than 75 microns.

7. (Cancelled)

8. (Original) The electrical connector of claim 1 wherein said electrical connector has a contact resistance of less than 2 milli-Ohms.

9. (Original) The electrical connector of claim 1 wherein said embedded particles have an aspect ratio of 5 to 1.

10. (Original) The electrical connector of claim 1 wherein said embedded particles have an average height of equal to or less than 25 microns above the first surface.

11. (Original) An electrical connection comprising: a first connector having a first surface formed from a first electrically conductive material and embedded on said surface a plurality of spaced apart particles of a second electrically conductive material, said particles having a nominal pre-embedded diameter of greater than 50 microns and forming a discontinuous layer raised on said surface with said second electrically conductive material being other than said first electrically conductive material; and a second connector releasably engaged with the first connector, thereby forming said electrical connection.

12. (Original) The electrical connection of claim 11 wherein said first surface is made from a metal comprising at least one of copper, aluminum, brass, stainless steel or tungsten.

13. (Original) The electrical connection of claim 11 wherein said particles comprise at least one of tin, silver, gold, platinum, metal alloys, or mixtures thereof.

14. (Currently Amended) The electrical connection of claim 13 wherein said particles comprise tin or mixtures of tin and any other ~~another~~ metal.

15. (Original) The electrical connection of claim 14 wherein said particles comprise alloys of at least one of tin-copper, tin-silver, or tin-lead.

16. (Original) The electrical connection of claim 11 wherein said particles have a nominal pre-embedded diameter of greater than 75 microns.

17. (Original) The electrical connection of claim 11 wherein said electrical connector has a contact resistance of less than 10 milli-Ohms.

18. (Original) The electrical connection of claim 11 wherein said electrical connector has a contact resistance of less than 2 milli-Ohms.

19. (Original) The electrical connection of claim 11 wherein said embedded particles have an aspect ratio of 5 to 1.

20. (Original) The electrical connector of claim 11 wherein said embedded particles have an average height of equal to or less than 25 microns above the first surface.

21 – 31 (Cancelled)